St Joseph's School
El Obour

Science Department

5th Primary
1st term



Name: ……………………………………

Class: ……………………………………

Unit One: Energy

Lesson (1): Light

A. Complete the following statements:

1) ……………is a form of energy that can be seen and it's called…………..
2) Light rays never travels in ………………..lines.
3) 2.Light reflects when it falls on………………surface
4) ……………………………,……………………………….and…………………………..are from the properties of light.
5) …………………phenomena occurs when light passes through drops of rain
6) The object image that is formed through narrow holes is ………….. and …………………
7) The nearer object to the light source has the …………….shadow.
8) We can see objects around us when ……….. fall on them, then it ……………. to reach our eyes
9) Light can easily transmit through…………….and ……………….. materials.
10) ………………materials allow some light to pass through, but ……….. materials don't allow light to pass through.
11) Cartoon and …………..are examples of ……………materials.

12) The presence of ……………………and………………………are from the necessary factors for light reflection.

13) ………… is from evidence of traveling light in straight lines.

14) ……………………and……………………are types of the light reflection.

15) ………………..is the reflection of light on a rough reflecting surface.

16) Light ………………..when it falls on a mirror ,while it ……………………when it passes from water to air.

17) When a light ray passes from glass to air it ……………………

18) If you stand at 50 cm in front of a plane mirror, your image is formed at ………………cm from the mirror.

19) When the seven visible spectrum colors accumulate together ……………… light is formed.

20) ………….. is the dark area form behind opaque body

21) Light bouncing when it falls on an object is called…………………………

22) ……………………is phenomenon produced by the separation of light into seven spectrums during raining.

23) In the seven spectrum colour, the………………….colour lies between the red colour and the yellow colour.

24) Sun light separated into ………………..colours by passing it through a

……………………

25) Light reflects regularly when it falls on ………….

26) When light pass between two transparent medium it changes its

…………………&…………………… so it ………………………

B. Put (√) or (X) and correct the wrong one:

1) The formation of shadow indicates that light travels in curved lines.( )

2) Semi- transparent materials let most light to pass through and we can see objects clearly through them. ( )

3) The amount of light that's transmitted through tissue paper is more than the light transmitted through a glass window. ( )

4) A spoon appears broken when it is placed in a cup of water due to the reflection of light. ( )

5) Green light can be analyzed into seven spectrum colours. ( )

6) When the sunlight passes through the drops of rainwater, rainbow is formed. ( )

7) An inverted image is formed when light pass through wide holes. ( )

C. Write the scientific

1) The materials which you can see objects behind them clearly and in full details. [……………………………………]

2) It is the light energy that can be seen. [……………………………………]

3) The materials which allow some light to pass through and we can see objects through it less clearly. [……………………………………]

4) The materials that form a clear shadow with a sharp edge when light fall on them. [……………………………………]

5) The reflection of light on a piece of white paper in different directions. [……………………………………]

6) Red, orange, yellow, green, blue, indigo and violet. [……………………………………]

7) A structure used to separate the white light into seven spectrum colours. [……………………………………]

8) Seven colours are produced as a result of splitting the white light. [……………………………………]

9) A phenomenon occurs in the sky after raining in a sunny day. [……………………………………]

10) The materials that from faint shadow when light falls on them. [……………………………………]

11) The main source of light on Earth. [……………………………………]

12) The reflection of light rays when they fall on white paper.

[..]

D. **Give reason for:**

1) The formation of an inverted image through narrow holes

....

2) A clear glass is a transparent material.

....

3) Shadow of an opaque body is formed when light falls on it.

....

4) The pencil appears broken in a cup of water.

....

5) You can see your image in a plane mirror.

....

6) Seeing the pen bending in a transparent cup of water.

....

7) The formation of light spectrum.

....

8) The rainbow appears in the sky after rainfall.

....

9) A light beam changes its direction when it passes from air to water.

……………………………………………………………………………………………

E. Compare between:

1. Transparent , semi-transparent and opaque materials

P.O.C	transparent	Semi-transparent	opaque
Transmitting of light			
Seeing object behind			
example			

2. Regular and irregular reflection

P.O.C	Regular reflection	irregular reflection
Definition		
example		

Lesson (2): Seeing coloured objects

A) Complete the following statements:

1) If the seven spectrum colours are mixed together, they produce ……………………

2) The transparent colored body seems with the same color of …………………… light

3) When the white light strikes a transparent green object, it absorbs ……………………and allows ……………………to pass through.

4) The transparent colored objects have the same colour of the ……………………………

5) When a white light falls on a transparent red bottle, the bottle absorbs ……………………and permits the …………………… to pass through.

6) When a white light falls on a yellow translucent plate, the plate absorbs all the light colors except ……………………

7) All the light are ……………………when they fall on a white opaque body.

8) If the red light strikes a white ball, it looks in …………………… colour

9) The white board ……………………all the light colours , while the black board ……………………all the light colours.

10) We prefer to wear ……………………clothes in summer and …………………… clothes in winter.

11) ……………………………reflects its own light only , while ………………………
allows its own colours only to pass through.

12) ……………………absorb all light colours , while ……………………absorb all the light colours and reflects its own colour only.

13) The red dress seems red when you look at it through …………… or …………… glass sheet and seems ………………when you look at it through a blue glass sheet.

14) When you look at a red apple through a yellow glass sheet, it seems ……………………

15) ………………,…………………and……………………are the primary coloured lights.

16) ………………,…………………and……………………are the secondary coloured lights.

17) Mixing ………………and……………………lights give yellow light.

18) Mixing red, blue and green lights gives……………………light.

19) Mixing ………………and……………………lights produce magenta light.

20) Mixing red and green lights gives…………………………light.

21) ………………… are colored light that are produced by mixing two of primary colors while ………………… is produced by mixing all primary colors

B)Put (√) or (X), then correct it :

1) When white light strikes a red flower, it reflects the white colour. ( )
2) We see the coloured transparent body with the same colour, because it reflects all the light colours. ( )
3) The black t-shirt reflects all the light colours. ( )
4) The red table reflects all the light colours. ( )
5) Mixing yellow, green and blue lights gives the white colours. ( )
6) Mixing red and green colours dyes give the same colour as mixing red and green colours light. ( )
7) When you look at a black body through a glass plate, the body and the plate seems black. ( )
8) We must wear black or dark clothes in winter. ( )

C)Write the scientific term:

1) The light that is impossible to be produced mixing two of other coloured lights. [...]
2) The objects that reflect all the light colours when the white light falls on them. [...]
3) The objects that absorb all light colours when the white light falls on them. [...]

4) The object that absorbs all the light colours and reflects its own colour only. [……………………………………………]

5) A light that is produced by mixing red, green and blue.

[……………………]

6) Coloured lights that are mixed together to produce cyan light.

[…………………………………………]

D) Give reason for:

1) A banana fruit seems yellow when sunlight falls on it.

………………………………………………………………………………………………………

2) The red transparent ruler appears red when white light falls on it.

………………………………………………………………………………………………………

3) We see the white paper as it is.

………………………………………………………………………………………………………

4) If a white light strikes a transparent blue glass sheet; the blue light only transmits through it.

………………………………………………………………………………………………………

5) The chalk appears white, while the broad appears black.

………………………………………………………………………………………………………

6) Red, green and blue are called primary coloured lights.

………………………………………………………………………………………………………

7) Magenta is called a secondary coloured light.

....

8) The yellow banana seems black when you look at it through a green glass sheet.

....

E) Compare between primary light colors and secondary light colors:

P.O.C.	primary light	secondary light
definition		
Example		

Lesson (3): Magnetism

A) Complete the following statement:

1. The two types of magnet are ………………..and ……………………
2. The like magnetic poles ………………. each other, while the dislike magnetic pole………………… each other
3. The natural magnet is one of the ……………….ores which is known by……………………
4. Aluminium, chalk and wood are ……………………., while nickel and cobalt are …………………….
5. A freely suspended magnet always takes ………………….direction.
6. The compass is used to identify the ……………………
7. The magnetic needle should be ………………. And …………………
8. ………………..and……………….are from the shapes of the artificial magnet.
9. Magnetism is concentrated at the……………………, while it disappears in the ……………….of magnet.
10. Magnetic force is ………………… force.
11. …………………… Magnet is a magnet made by man from ………or……..………
12. Each magnet has ……………. ends called ………………….

13. The natural magnet was discovered more than.....................

14. ....is the magnet ability to attract the magnetic materials existed in its field.

15. The materials that attract to the magnet are called ....

16. Matter can be divided into .... and .... due to their magnetic abilities.

17. The English scientist .... made a magnetized needle which is used nowadays in making ....

B. Write the scientific term:

1) A black rock of iron ores known as magnetite. [........................]
2) The space around the magnet where the magnetic forces appear. [..............................]
3) The ability of the magnet to attract the magnetic materials existed in its field. [.................................]
4) A set used to locate the four main geographical directions. [..............................]
5) The materials that are attracted to the magnet [............................]

6) A region on the magnet has the most powerful force of attraction [.............................]

7) A region around the magnet at which that effect of the magnetism appear.[..............................]

8) The materials that don't get attracted to the magnet [..].

9) The pole of the magnet which points to the north direction of the earth. [.............................]

C)Give reason for:

1) Some materials called non-magnetic material.

....

2) One of the poles of the magnet called North Pole and the other the South Pole.

....

3) The north pole of the magnet attracts the south pole of another magnet, but it repels the North Pole.

....

4) When you sprinkle iron filings on a glass plate placed on a magnet then you knock on the glass, the iron filings assembled at the two ends. ……………………………………………………………………………………

5) The compass used to locate the main four geographical directions.

……………………………………………………………………………………

6) Iron nails are attracted to the magnet.

……………………………………………………………………………………

D) Put (√) or (X) and correct the wrong one:

1. There are different shapes of natural magnet. (……….)
2. Materials that are attracted to magnet are called magnetic materials.(……….)
3. Irons, cobalt and. copper are magnetic materials. (   )
4. Glass, nickel and wood are non- magnetic materials. (   )
5. The freely suspended magnet always takes a fixed direction. (…….)
6. Magnetism decreases as we go far from the two poles towards the middle. (   )
7. When the north pole of a magnet get near to the north pole of another magnet, the two poles attract each other. (   )

8. The magnetic field is the ability of the magnet to attract the magnetic materials existed in its field. (………)

E) Compare between magnetic materials and nonmagnetic materials

P.O.C	**magnetic materials**	**nonmagnetic materials**
definition		
Example		

Lesson (4)

Magnetism and electricity

A) Complete the following statement:

1) The magnet which made by the effect of electricity called ……………………
2) The electromagnet loses its magnetic force by ……………………………
3) ………………,………………and……………..are examples of devices that contain Electromagnet.
4) ………………….is the scientist who discovered how to make the dynamo.
5) The magnet has …………………… effect
6) A huge electric generator consists of ………………….that turn between the two poles of……………………..
7) The electromagnet convert the ……………..energy into……………energy, while the dynamo convert ……………..energy into ………………..energy.
8) Generating a magnetic field by using the electric current is the idea of making………………
9) The ways to increase the amount of electricity produced by the dynamo are …………………….and……………………….

10) The dynamo fixed in the bicycle touching the bicycle ....

11) The coil of the dynamo made of ....

12) A huge electric generator is used in ....station.

13) The magnetic force of the electromagnet increase by ....the intensity of .... passing through the coil.

14) The wire winding on the electromagnet made up of ....

15) Electromagnet consist of ....,..................... and ....

16) Electric current has .... effect.

B. Write the scientific term:

1. A device used to change the electric energy into magnetic energy.[..................................]
2. A device used to detect the magnetic effect of the electric energy. [..................................]
3. The magnet that made by the effect of the electric current. [..................................]
4. A scientist who discovered that the magnetic energy could change to electric energy. [.....................................]

5. A set used to lighten the bicycle lamps. [..................................]

6. An instrument used in the electric power stations.

[..................................]

7. An instrument used in the electric winches and electric bells.

[..................................]

8. A device used to measure the electric current intensity.

[..]

9. A metal used in making the electromagnet. [..................................]

B) **Give reason for:**

1) The electromagnet is a necessary device.

....

2) When an electric current flows through a wire that is put beside a Compass, the compass needle deflects.

....

3) In the electromagnet, we must increase the number of batteries

....

4) The small cylinder in the bicycle's dynamo touches the bicycle's wheel tire.

....

5) The huge electric generator is used in electric power stations

……

C)Put (√) or (X) and correct the wrong one:

1. The electric current has a magnetic effect. (   )
2. The electromagnet changes the electric energy to mechanical energy.( )
3. Electromagnet used for making electric bells, electric winches and cranes.(   )
4. When an electric current passes through a wire coiled around a wrought iron bar , the wrought iron bar becomes a permanent magnet.( )
5. William Gilbert is the scientist who discovered that the magnetic energy could change into electric energy. (   )
6. Electric current can be generated from magnetism, but magnetism can't be produced from electric current. (   )
7. Dynamo changes the electric energy into kinetic energy (   )

Unit (2)
Lesson (1): Mixtures

Complete the following statements:

1-Substance that made of only identical particles is called …………..
2-……………………..consists of more than one type of particles.
3-Milk and concrete are examples of ……………………..,While distilled water and baking soda are examples of ………………………..
4-Air and mineral water are examples of ……………………..
5- ……………….,……………….. and……………….. are from the types of mixtures
6-vinegar and water is …………………….. mixture, while sand and water is …………………….. mixture
7- Both sea water and mineral water are …………………. because each of them consists ……………………………………….
8-Each component in the …………………. keeps its own properties
9-Mixtures can be formed by …………………,…………………… and ……………………
10-A mixture of salt and pepper can be formed by …………………….or ……………………
11-Components of a mixture can be separated by ……………………………, ……………………….,……………………………….and………………………………….
12-Iron fillings and sand can be separated by using ……………………………
13-……………………..process is used to separate sand and water.
14-……………………..process is used to separate a salt from its solution.
15-……………………..is used to separate water –oil mixture.
16-To separate insoluble solid like sand from salty solution , we use ……………………..process.

2) Put (√) or (X), then correct it:

1-Sugar and baking soda are mixtures. (   )

2-A mixture is made of only one type of identical particles. (   )

3-You can see the different components of the salty water. (   )

4-Mixtures are formed by magnetic attraction, filtration and evaporation. (   )

5-Solid –liquid mixture is separated by a separating funnel. (   )

6-Sand and water mixture is separated by evaporation process. (   )

7-A mixture of any solid and iron filings can be separated by using a strong magnet. (   )

8-Sugary solution can be formed by shaking or stirring. (   )

9-A mixture of mango and banana juices is formed by stirring or shaking. (   )

10-Vegtables soup is considered as a mixture. (   )

11-The properties of mixture are the same properties of its components. (   )

12-The separating funnel is used to separate a solid-liquid mixture. (   )

13-We can separate a mixture of oil and water by filtration. (   )

14-A mixture of rice and iron nails can be separated by using a magnet. (   )

15-Salty solution can be separated by evaporation. (   )

16-We obtain table salt from seas and oceans by evaporation process. (   )

3) Write the scientific term:

1-Substance in which,their components can be separated easily.
[.................................]
2-A mixture of oxygen,nitrogen,carbon dioxide and water vapour.
[.................................]
3-A method used to separate a soluble solid material from water.
[.................................]
4-A method used to separate magnetic substances from any solid mixture. [.................................]
5-A type of mixture in which, we cannot distinguish between its components. [.................................]
6-A type of mixture in which , we can distinguish between its components. [.................................]
7-A method used to mix solid-solid mixture. [.................................]
8-A mixture formed by dissolving sugar in milk. [.................................]
9-A type of matter that its components keep their own properties.
[.................................]
10-A method used to separate a substance that is insoluble in water.
[.................................]
11-A set used to separate a mixture water and oil. [.................................]
12-A method used to form a mixture of salt and pepper.
[.................................]

4) Give reason for:

1-Mineral water considered as a mixture.

....

....

2-Table salt is collected from sea water.

....

....

3-A magnet can be used to separate iron fillings from sand.

....

....

4-A mixture of sand in water is different from a mixture of sugar in water.

....

....

5-Distilled water and baking soda are pure substance.

....

....

How can you separate the following?

1-A mixture of sand, water and sugar.

....

2-A mixture of oil and rice.

....

3-A mixture of iron nails, sugar and rice.

....

4-A mixture of oil and water.

....

5- A mixture of salt in water.

....

Lesson (2): Solutions

Complete the following statement:

1- Mixture are classified into two types……………and…………

2- ………….is a type of mixture that its components cannot be distinguish

3-Heterogeneous liquid mixture is called a ……………

4-The components of ……………can be distinguished, while the components of …………….. can't be

5-The solution consists of …………and ………. Which are mixed by…………. Process

6-………… .and………….are heterogeneous liquid mixture

7- Homogenous liquid mixtures are called……………. , while heterogeneous liquid mixtures are called ……………

8-The substance which dissolves in a liquid is called…………………

9-The substance the solute dissolves is called……………………

10 -In sugary solution , sugar is the ………., while water is the……….

11-When a substance doesn't dissolve in a certain solvent a ………….is formed

12-Solubility process is affected by ……… , ………. ,……….and ………

13-Decreasing …………increase the solubility time

14- The time required to dissolve the same quantity of salt in cold water is ………………. than the hot one .

15-The quantity of ………….and………… affects the solubility process

16-Increasing the quantity of solvent……………the solubility time

2) Put (√) or (X):

1. Solution is heterogeneous mixture. (   )
2- The substances that its components cannot distinguish are suspension. (   )
3-Any solution is composed of a solvent and a material dissolved in it (   )
4. Lemon juice and mud in water considered as suspensions. (   )
5-Solubility does not depend on the amount of the solute and the solvent.
6. In case of sugary solution, sugar is the solute. ( )
7-The heterogeneous mixture can be separate by using a strong magnet. ( )
8. Water considered as the common solvent for many solutes. ( )
9. As the temperature increase, the solubility time increases. ( )
10. Increasing the quantity of solvent when using the same amount of solute leads to increase in the solubility time. (   )
11. Shaking leads to decrease the solubility time. (   )

3) Write the scientific term:

1-The mixture of insoluble solid substance in water.

[....................................]

2-The liquid that used to dissolve the solid substance.

[....................................]

3-A process by which the solute disappear in the solvent forming a solution. [....................................]

4-The mixture that composed of a solute and a solvent.

[....................................]

5- The mixture that its component cannot be distinguished.

[....................................]

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4) Give reason for:

1-The solubility time of sugar differs than that of sodium chloride.

....

2-The solubility time is affected by temperature and stirring.

....

3-It is better to dissolve 10 gm of sugar in 20 ml of water than dissolving it in 5 ml of water.

....

4-Water is a common solvent.

....

5. We can easily separate sand from water.

....

Unit (3): Environmental balance

Lesson (1): Food relationships among living organisms

Complete the following statement:

1. Green plants make photosynthesis process by using ………. In the presence of …………….as a source of energy.
2. In predation, the animal that devours another one is called ………..., while the devoured animal is known as…………….
3. ……. .Is a temporary relationship that ends up by devouring the prey.
4. Predation is less common in……………world than in …..world
5. ……….plants have to prey some insects to get their needed elements for making ………..substances
6. ………….and ……….are from the ways of self-defense against predation in living organisms
7. During ………………phenomenon, the living organisms changes its colour to simulate its surrounding environment
8. Bees which look like wasps undergo ……….phenomenon ,while chameleon undergoes ………..phenomenon to protect themselves against enemies
9. The food relationship between nodular bacteria and leguminous plants is known as ……….. Where it provides leguminous plant with …………. and nodular bacteria benefit …………from it
10. There is a ………..food relationship between crocodiles and some birds.

11. In saprophytic relationship, the saprophytes get their food by decomposing …………and …………
12. In parasitism relationship, the death of the ……… is considered a loss to the………….
13. In the external parasitism , the parasite suck the ……………and also convey ……………to it
14. In internal parasitism, the parasites share the hosts ……………..or feed on their………..
15. Fleas can convey …….disease to man , while Ascaris worm causes ……………to him

Write the scientific term:

1-The plants that devour small insects.
[…………………………………]

2- The phenomenon that the living organism makes it to protect itself from enemies by changing its colour to simulate its surrounding environment. […………………………………]

3- The food relationship between insects as bees and the flowers of plants. […………………………………]

4- The harmed organism in parasitism relationship. […………………………………]

5- The worm which infects man with elephantiasis disease.
[…………………………………]

6-A disease caused by parasitic ascaris worm.
[…………………………………]

Mention the kind of food relation ship between each of the following:

1. Lion and deer. [..]
2. Halophila plant and insects. [..]
3. Jawless lamprey and fish. [..]
4. Lice and man. [..]
5. Crocodiles and some birds. [..]
6. Hippopotamus and some birds. [..]
7. Fungi and dead organisms. [..]
8. Nodular bacteria and bean plants. [..]

Give reason for:

1- Predation is less common in plant than in animal.

....

2-Some plants are called insectivorous plants.

....

3-Some animals have the ability to camouflage.

....

4-There is a mutualism between nodular bacteria and leguminous plants.

....

....

5-Saprophytic organisms are decomposers.

....

....

6- Parasitism relationship differs from the predation relationship.

....

....

Put (√) or (X):

1. The commensalisms relationship ends by killing one organisms or devouring a part of it ( )
2. Predation is a permanent relationship ( )
3. In parasitism, animals get their food by attacking , killing and devouring other living organisms ( )
4. In mimicry relationship , the living organisms protect themselves by changing their colour to simulate the colour of the surrounding environment ( )
5. In camouflage, harmless living organisms imitate other harmful or poisonous living organisms to frighten their enemies ( )
6. Fleas conveys small pox disease to man ( )
7. In parasitism, the organism that is harmed is known as the host. ( )

Lesson (2): Environmental balance

Complete the following statements:

1-An ecosystem is any natural ………………….area including ………………… and ……………………

2-The balance between the components of the ecosystem is called……………………….

3-…………………………..is a food relationship that organizes the numbers of preys.

4-The components of ecosystem are ……………………. and ……………………

5-Man interference as …………………,………………….and ……………………… leads to …………………….

6-The balance between the components of the ecosystem is called …………………………

7-The disturbance happens in the ecosystem produced as a result of ……………………and ……………………….

8-…………………and……………………are from the factors that harm the environmental balance.

9-In ancient eras, the changing in natural conditions cause the extinction of ………………………..

10-Predators help preys in getting rid of …………………… or………………. members.

11-The disappearance of predators in an ecosystem causes the increase of ………………and……………….become insufficient.

12-…………………..and……………………are relationships that keep the environmental balance.

13-…………………..organisms help the environment to get rid of dead organisms and help in ………………….the chemical elements found in dead organisms.

14-The chemical elements as ……………………,……………………and phosphorus back to the environment with the help of ……………………

Write the scientific term:

1-The balance among the components of the ecosystem. [………………………………]

2-The phenomenon that appears among preys populations due to the storage of food in the ecosystem. [………………………………]

3-A huge ecosystem. [………………………………]

4-The phenomenon that had occurred to some animals in ancient eras. [………………………………]

5-Natural area, which includes non-living things and living organisms. [………………………………]

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4) Put (√) or (X):

1-Ecosystem is an artificial area including living organisms and non-living things. ( )

2-Any disturbance in the ecosystem will lead to environmental balance ( )

3-If saprophytic living organisms were extinct; earth surface would cover with dead bodies. ( )

4-Predation helps in environmental imbalance. ( )

5-Interaction among the environmental components keeps the balance within the ecosystem. ( )

6-The ecosystem may be very large as the ocean. ( )

7-When food resource in the ecosystem become insufficient, mutualism appears among preys population. ( )

8-Saprophytic organisms are responsible of recycling chemical elements found in dead bodies. ( )

Give reason for:

1-The change of natural condition causes an environmental imbalance.

....

....

2- Predation is useful to environmental balance.

....

....

3- Competition may appear among prey's population in the ecosystem.

....

....

4- The extinction of many animals as dinosaurs.

....

....

First Term General Revision

1 Complete each of the following statements:

a. Like magnetic poles .... and dislike ones .... each other.

b. Fungi are considered as ....

c. ...., ... and .... are primary colours.

d. Electromagnet consists of .... and ....

e. The food relationship among cat and rat is ....

f. Decomposers are considered the .... of nature.

g. Solution is a type of ....

h. The magnetic force is most powerful at the .... of the magnet.

i. Green plants are .... organisms.

j. Bilharzia worm is a ....

k. The .... contains a small light magnet moves freely around a fixed axis.

l. The food relationship in which both organisms benefit from each other is known as ....

2 Choose the correct answer:

a. The dynamo ....
1. changes the electric energy into the mechanical one
2. changes the mechanical energy into the electric one
3. changes the mechanical energy into the thermal one

b. Bacteria is a ....
1. producer 2. parasite 3. decomposer

c. Red, green and blue light are .... lights.
1. primary 2. secondary 3. complementary

d. The process of photosynthesis is done by a .... living organism.
1. producer 2. decomposer 3. consumer

e Light transmits in .... lines.
1 curved 2 broken 3 straight

f When a magnet is hanged freely, its north pole refers towards the ....
1 north 2 south 3 east

g Most mixtures formed by dissolving in liquids are ....
1 homogeneous 2 heterogenous 3 identical

e Green plants are considered as .... organisms.
1 decomposers 2 producers 3 consumers

3 Put (✓) or (✗) and correct the underlined word if it is not correct to make the statements right :

a When water and suger get mixed up, a heterogeneous mixture is formed.

b The less the amount of solvent decreases, the more the solution time increases.

c Fungi feeding on the dead organisms bodies are called saprophytes.

d Among the different types of fungi, mushroom is distinguished by its ability to make its food.

e Transparent objects have the same colour of the light that doesn't travel through.

f Opaque objects have the same colour of the light which the object reflects.

g Cyan, purple and yellow are the primary colours.

h Solubility speed decreases by shaking and rising the temperature.

i The solubility speed of solids increases by grinding.

j Increasing the amount of solvent decreases the speed of solubility.

k Mixtures can be separated by the magnetic attraction, filtration and evaporation.

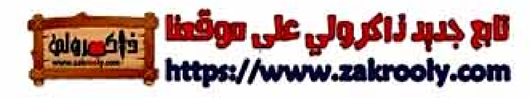
- l) Mixing red, green and blue colours produces the white colour.
- m) Aluminium gets attracted to the magnet.
- n) An electric current can be generated by using a magnet.
- o) Magnetism is always related with electricity.

4 Give reasons:

- a) White light can be separated.
- b) Dynamo can change mechanical energy into electric one.
- c) Solution is a type of mixtures.
- d) The parasite does not kill its host.
- e) Parasitism may be external or internal.
- f) Some materials are magnetic.
- g) There are different types of solutions.
- h) Green plants can make their own food.
- i) Some mixtures can be separated by using a separating funnel.
- j) Predation is a temporary food relationship.
- k) Rainbow can be seen after heavy rain falling.

5 What is the difference between each pair of the following:

- a) The transparent and obaque materials.
- b) The primary and secondary colours.
- c) The solvent and the solute.
- d) The magnetic and non-magnetic materials.
- e) The external and internal parasites.
- f) Parasitism and saprophytism.
- g) The solution and the mixture.
- h) The homogeneous and heterogeneous mixtures.
- i) The solution and the suspension.



Exercise (1)

1 Write the scientific term for each of the following:

a. The materials that are attracted to the magnet
b. A region on the magnet has the most powerful force of attraction.
c. A region around the magnet at which the effect of the magnetism appear.
d. Living organisms which decompose dead organisms.
e. Food relationships between organisms get their food by devouring other organisms.

2 Complete the following statements:

a. The materials that objects can be seen throught, are called ....
b. The opaque materials seems to be coloured withe ....
c. The red, green and blue lights are called ....
d. The scientific idea of dynamo depends on the conversion of the ....energy into .... energy.
e. Seafarers use .... during their navigation in oceans.
f. .... is considered as a common solvent due to its ability to dissolve several substances.
f. .... is a way of separating mixtures.

3 Compare between each pair of the following:

a. Transparent and opaque materials.
b. Primary and secondary lights.
c. Magnetic materials and nonmagnetic materials.
d. Solvent and solute.
e. Mixture and solution.
f. Parasitism and saprophytism.
g. Externally parasites and internally parasites

Exercise (1)

4 Name the equipment that can be used in each case:

a

b Fixing the north and south directions.

c

d Separating a mixture of oil and water.

5 Choose the number which indicates the correct answer :

a Light propagates in .... lines.

b Light cannot be pass through .... materials.

1- transparent 2- semi transparent 3- opaque

c

1- iron 2- aluminum 3- copper

d When you mix two or more kinds of matters together, the produced matter is called ....

1- element 2- compound 3- mixture

e .... is used to separate a mixture of oil and water.

1- Evaporation 2- Filtration 3- separating funnel

f

1- solvent 2- solute 3- mixture

g .... takes place by some living organisms to hide from their enemies.

1- commensalism 2- parasitism 3- camouflage

h Predation acts to .... the number of prey.

1- constant 2- double 3-decrease

Exercise (2)

Question (1)

Complete the following statements:

1- Light reflects when it falls on .... surface.

2- Light reflects when it transfer between two .... media.

3- Compass consists of .... freely move.

4- .... and ....are ways of mixing solid materials

5- Some autotrophic plants have to prey insects to get their required elements for making ....

Question (2):

Compare between each two pairs:

1- Regular and irregular reflection

2- Magnetic and non-magnetic materials.

3- Commensalism and parasitism.

Question (3);

What happens in each case ....?

1- Fixing a magnetic needle on a piece of cork in a basin contains water.

2- Passing of electric current in a wire wrapped around a rod of soft iron.

3- Stirring two equal amounts of sugar in two beakers contain unequal amounts of water.

Question (4);

Put (V) or (X) in front of each of the following then correct the wrong one:

1- Mixtures can be formed by shaking, grinding or stirring. ( )

2- Filtration is used to separate a mixture of solid materials. ( )

Exercise (2)

3- Some living organisms can change its colour to simulate the colours of the evironment where it lives to hide from their enemies. ( )

Question (5);

Answer the following questions:

1- How you can prove experimentally that light propagates in straight line?
2- What is the kind of materials can be used to cover windows of photographic rooms for imaging?
3- Illustrate the food relationships between sponge animal and other aquatic tiny animals

Question (6):

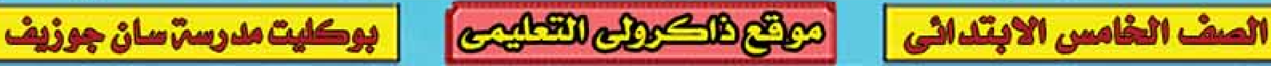
Write the scientific term for each of the following:

1- Materials that objects can be seen clearly through it.
2- Objects can be seen with the colour of its reflected light.
3- A temporary relationship which ends up by devouring the prey or a part of it.

Question (7):

Explain the following briefly on:

1- Formation of shadows.
2- The light transmission through different materials.
3- Rainbow
4- Idea of making dynamo.
5- Factors affecting solubility process.



Exercise (2)

Question (8):

What is meant by each of the following ?

1- Reflection of light. 2- Ecosystem

Question (9);

Give reasons for each of the following :

1- The transparent and semitransparent bodies bodies appear coloured with the lights

2- No mixing will happen on adding sand to water.

3- Saprophytic organisms feed on the bodies of dead organisms.

Exercise (3)

Question (1):

Complete the following statements:

1- Strawberry fruit seem to be in red colour because it reflected only the .... colour.

2- As the light falls on the green grass, the grass must absorb .... colors except ....

3-

4- The ancient Greek discovered the black rocks in a region called ...., these rocks attract the materials which made of ....

5-

6- The electric magnet losses its magnetism when ....

7- .... used to pick up the huge iron masses.

8-

Question (2);

Write down the scientific term :

1- The natural area including living organisms and non-living things.

2- A kind of parasites may live on the host's body to get their food.

3- The organisms which help to get rid of dead organisms.

4- The material at which the solute disappear in it.

5- The mixture results from the solubility of solids in liquid.

6- The process of formation a solution.

7- The light results from the mixing of red, blue and green colours.

8- The light results from mixing the seven spectrum colours.

Exercise (3)

Question (3);

Choose the correct answer ;

1- Light rays that can be seen are called....................
a) Visible spectrum. b) Infrared
c) Ultraviolet d) all the previous

2- We can see things as a result of ....of rays.
a) reflection b) refraction
c) Absorption

3- Which of the following is considered as a secondary colour?
a) yellow b) green
c) blue d) red

4- The natural magnet is discovered since .... ago.
a)2000 b) 3500
c) 2050 d) 2500

5- When the magnet is hanged freely it will take the direction.....................
a) north and east b)east and south
c) south and north d) west and east

6- The compass contains ....
a) horse shoe magnet b) bar magnet
c) small magnetic needle d) ring magnet

7- When the compass is put beside a wire carrying electric current -------------
a) no deflection occurs. b) the needle deflects.
c) the needle destroyed d) no correct answer.

Exercise (3)

The apple juice is considered as ....

a)liquid mixture
b) solution
c) solid mixture
d) a &b together.

9- .... ejects a black colour fluid in the surrounding water when attacked by

a) Frog
b) Sepia
c) Butterfly
d) Chameleon

10- The animal that devouring other animal is called ....

a) parasite
b) host
c) prey
d) predator

Question (4):

Give reason for each of the following:

1- The time of dissolving sodium chloride is differing than time of dissolving sodium carbonate.
2- Water is considered as a common solvent.
3- Air is a mixture.
4- The magnet is used to separate iron filings and sand.
5- The deviation of the ammeter's pointer when move a wire between the two poles of the magnet up and down.
6- Aluminum, copper and glass are non-magnetic materials.
7- The green colour is considered as a primary colour.

Exercise (3)

8- It is preferred to wear black clothes in winter.

9- The moon cannot be considered as a source of light.

10- mages can be formed by using narrow holes.

Question (5):

Put (V) or (X) in front of each of the following then correct the wrong one:

1- ( )

2- The body nearer to the light source has the greater shadow. ( )

3- The red colour is the first spectrum light, while the violet colour is the last spectrum ligh‘. ( )

4- The green table reflected all light colours. ( )

5- When you look to a black body through a glass plate, the body and the plate are seem with the same colour. ( )

6- The magnetic field can be seen by detected iron filings. ( )

7- The magnet has three poles. ( )

8- The electromagnet losses its power when the electric current is cut. ( )

9- The dynamo of the bicycle is in the shape of a cube touches the tire. ( )

10- The oil and water can be separated by filtration. ( )

11- Solvent + solute $\xrightarrow{\text{solubility process}}$ solution. ( )

12- The relation between flaria worm and man is a parasitism relationship ( )

13- Predation is a temporary relationship between predator and prey. ( )

Exercise (3)

Question (6):

What's meant by each of the following.........................:

1- Visible light
2- Opaque material.
3- Secondary lights.
4- Magnetic materials.
5- Magnetic field.
6- Electromagnet.
7-
8- Mixture
9- Camouflage.
10- Parasitism.
11- Ecosystem.
12- Mutualism.

Question (7):

Compare between each of the following:

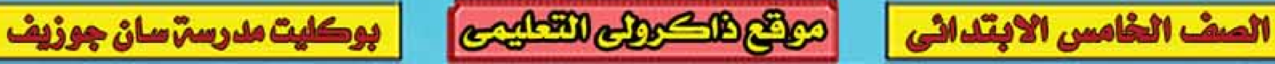
1- Saprophytism and parasitism.
2- Reflection and refraction of light.
3- Regular and irregular reflection.
4- Natural magnet and electromagnet.
5-

Question (8):

Choose from the column (A) which suitable with column (B):

(1)

column (A)	column (B)
a –A food relationship between man and worm.	1- Predation
b - A food relationship between bean plant and nodular bacteria.	2- Externally parasitism
c- A food relationship between cat and	3- Commensalism.
d- A food relationship between fungi and splashed bread.	4- Saprophytism
	5- internally parasitism



Exercise (3)

(2)

column (A)	column (B)
a- A mosquito	1- Causes elephantiasis
b- Flaria worm	2- Conveys small pox
c- Bread mould fungus	3- Causes malaria
d- Fleas	4- Causes anemia
e- Ascaris worms	5- Causes bread mould
	6- Causes plague

(3)

column (A)	column (B)
a- light	1- Opaque material.
b- Shadow	2- Separate light into seven colors
c- Glass	3- Transparent material.
d-	4- Propagates in straight lines.
e- Prism	5- Reflects sun light.
	6- A dark area formed behind a body exposed to light

(4)

column (A)	column (B)
a- Salt	1- Can be separated by separation funnel.
b- Oil and water mixture.	2- Can be separated by evaporation.
c- Pure water.	3- Can be separated by filtration.
d- Iron filings and sand mixture.	4-
	5- Can be separated by using a magnet.

Exercise (3)

Question (9):

What happens in each case of the following:

1- You look at your image through a transparent material.

2- When you look at the mirror.

3- When you look at a spoon put in a beaker contains water.

4- On passage of white light through a prism.

5-

6- On mixing the red colour with the green colour.

7- When a magnet is hanged freely to move.

8- When the north pole of a magnet get nearer to a south pole for other magnet.

9- On moving a wire up and down between the two poles of a magnet.

10- Cutting down of trees.

11- Absence of preys in the ecosystem.

12- Chemical elements are not recycled by saprophytic organisms in the ecosystem.

Question (10):

Essay questions:

❶ **Mention the kind of food relationship between each pairs of the following:**

a The lion and a deer.

b Nodular bacteria and bean plant.

❷ **Which process is faster and why :**

a The dissolving of a quantity of salt in hot water, and dissolving the same quantity of salt in the same quantity of cold water.

b The dissolving of a quantity of sugar in water with stirring, and dissolving the same quantity of sugar in the same quantity of water without stirring.



Essay questions:

c. The dissolving of a quantity of salt in 100 mill liter of water, and dissolving the same quantity of salt in 300 mill liter of water.

3. **Look at the opposite figure then answer the following questions:**
   a. What's the mixture that can be separated in the figure?
   b. Mention the way of separation in this case? Give the reason?

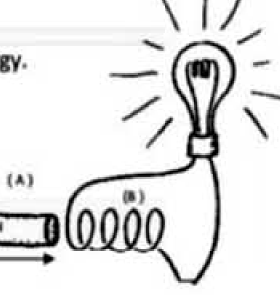
4. **Mention the function of each of the following:**
   a. Filter paper
   b. Electric magnet
   c. Compass
   d. Prism

5. **Compare between the dynamo and the electromagnet from the point of view of their scientific idea.**

6. **Mention the properties of the magnet.**

7. **Look at the opposite figure then answer the following questions:**
   a. The opposite figure explains .... phenomenon.
   b. Why the pencil is seen broken?

8. **Look at the opposite figure then complete the following:**
   a. The symbol (a) indicates .... and the symbol (b) indicates ....
   b. When (a) moves inside (b) .... must be generated.
   c. The apparatus converts .... energy into .... energy.
   d. The scientific idea of this apparatus is ....



Model Exam (1)

Question (1):

Write down the scientific term for each of the following:

(1) The darkened area that formed as a result of falling light on an opaque object.

(2) The force by which the magnet attracts some materials.

(3) A device used to convert kinetic energy into electric energy.

Question (2):

Put (√)or (x) infort of the each statement of the followingand correct the wrong ones :

(1) ( )

(2) There are no food relationships between living organisms. ( )

(3) The interaction between among environmental components leads to unbalance of ecosystem. ( )

Question (3):

Complete the following statements:

(1) The light.............. when transfers between two different transparent media.

(2) The magnetic forces concentrated at .... of the magnet.

Question (4):

Give reason for each of the following

(1) The picture formed through narrow holes is inverted minimized .

(2) Wood is non-magnetic material.

Model Exam(2)

Question (1):

Write down the scientific term for each of the following:

(1) The materials that doesn`t allow light to pass through, and objects can`t be seen through it.

(2) The space around the magnet in which the effect of magnetic force appears.

(3) A process needs the presence of solvent and solute.

(4) Food relationship between living organism devoured other organism.

Question (2):

(√) (x)

(1) Salt and water are mixed together by stirring or heating. ( )

(2) Filtration is used to separate soluble solid materials. ( )

(3) The balance of ecosystem occurs due interfere of man ( )

Question (3):

Compare between each of the following in a table (give examples):

(1) Magnetic materials and non-magnetic materials.

(2) Parasitism and saprophytism.

Question (4):

Complete the following statements:

(1) Compass is used in ....

(2) From primary light ....,............and..................

(3) .... is used to separate a mixture of oil and water.

Model Exam (3)

Question (1):

Choose the correct answer from between brackets:

(1) Light travels in ….. lines. (curved – refracted – zigzagged – straight)

(2) From magnetic material …….. (aluminum – nickel – copper – wood)

(3) From examples of primary light …….. (yellow – magenta – green – violet)

(4) The picture formed through a narrow hole is …………. (upright minimized – inverted minimized – inverted magnified – upright magnified)

(5) The substance which dissolves in a solvent is called …….. (solute – solvent – solution – mixture)

Question (2):

Put (√) in front of the right statement and (x) in front of thewrong ones:

(1) Ecosystem is composed of non-living things like water and living organisms like plants.

(2) The unlike magnetic poles repel and the like ones attract.

(3) Mixture can be formed by shaking, grinding or stirring.

(4) The north pole of the compass refers to the south geographical pole on the earth.

Question (3):

Complete the following :

(1) ……... is from the extinct organisms due to the changing the natural conditions.

(2) The external parasite that suck blood from the body is ………. and the internal parasite like ……………

(3) The dynamo is used to convert the ……. energy to ………. energy.

(4) From the factors affecting the solubility process ………….. and …………..

Question (4):

Illustrate the difference between the following with an example:

(1) Transparent and opaque materials.

(2) Pure substance and mixtures.

Model Exam (4)

Question (1):

Choose the correct answer from between brackets:

(1) The natural magnet is one of the ……. ores. (copper – iron – carbon)

(2) …….. objects have the same colour of light which the objects reflect. (transparent – semi-transparent – opaque)

(3) The solute in the mixture of chocolate and milk is ……….. (water – milk – chocolate)

(4) From examples of saprophytic organisms …………. (fungi – rabbit – plant)

(5) The types of parasites are …….. (external – internal – all the previous)

Question (2):

Put (√) in front of the right statement and (x) in front of the wrong ones :

(1) The main source of light on earth surface is electrical bulbs.

(2) As the temperature increases, the solubility becomes slowly.

(3) Air is a mixture of important and useful gases to man.

(4) Predation is a temporary process.

Question (3):

a- Give reason for each of the following:

1- The box of compass isn't made from iron.

2- A piece of marble isn't disappear when putting it in water.

b- Mention the name of the used tool:

1- A tool that determine north and south directions.

2- A tool that separates a mixture of oil and water.

Question (4):

a- Choose from column (B) what suits column (A):

(A)	(B)
a- Refraction	- separates the solid substances that dissolved in solution.
b- Yellow light results	- don't mix.
c- Evaporation	- autotrophic.
d- Water and oil	- occurs when light transmit through two transparent mediums.
e- Green plants	- from mixing red and green lights.

b- Write the scientific term for each of the following:

1- The energy that we can see.

2- A process by it we can separated the iron materials from sand.

3- An area that have most magnetic powerful force.